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10/539,597

06/17/2005

Georges Cholet

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EXAMINER

LE BOULLUEC, MICHAEL E

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--|--------------------------------------|--|
| Office Action Summary | Application No. 10/539,597 | Applicant(s) CHOLET ET AL. | |
| | Examiner MICHAEL LE BOULLUEC | Art Unit 2856 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 5 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 June 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Response to Arguments

1. In review of the amended claims with the claims from the first action, new limitations are improperly amended in claim 1. The new limitations added to claim 1 require underlining to denote new claim language. The examiner has examined the amended claims however, in all future responses the applicant should follow the guidelines in CFR 1.173(d) to avoid a response of improper amendment submittal.
2. Applicant's arguments with respect to claims 1-5 have been considered but are moot in view of the new ground(s) of rejection.

Drawings

Applicants' amended limitations have raised new drawing objections.

3. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because drawing is objected to based on new claim limitations. Figure 1 does not adequately disclose (1) a sensor for making measurements to determine "load loss" (page. 6, lines 22-26), (2) show that D₁ is not connected to the apparatus as detailed in the specification (page 6, lines 27-28), (3) D₂ is not connected to a paper ventilation valve as detailed in the specification (page 6, lines 29-30), (4) ΔP is not connected to a sensor and can not measure the draw through the cigarette as detailed in the specification (page 7, lines 1-2).
4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. It appears the "aspiration means" for measuring said aspiration flow (claim 5) is ASP and must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. It appears the applicant is using ASP as the aspiration means.
5. The drawings are objected to under 37 CFR 1.83(a) because they fail to show how one of ordinary skill in the art can determine pressure differences because the pressure sensor, D₁, ASP is not connected to the device as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d).

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Upon further review of the specification it appears the following elements are not present in the specification: V_1 and ASP. The applicant should thoroughly review the specification to verify if there are any other missing elements and make adjustments to the specification.

Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

6. Claim 1 objected to because of the following informalities:
- in line 13, the "first sphincter" is objected to since according to the specification, the second sphincter encapsulates the end portion of the filter, not the first sphincter;
 - in lines 3-4, a cigarette consists of only one filter, not two as stated.

Appropriate correction is required.

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7. Claim 5 objected to because of the following informalities:

- in line 10, "this part" should be - the second part -;
- in line 13, "a tube of" should be - a tube in -;

Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 1-5 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The term "load loss" is not defined sufficiently in the disclosure for one of ordinary skill in the art to determine what measurements are used in the calculation of "load loss". It is unclear as to exactly what "load loss" represents. Perhaps the applicant intended to use "head loss" which is a standard term used in the art which is calculated from pressure and gravity.

Claim Rejections - 35 USC § 103

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtsuki et al. (US Patent 4912964) and Herrmann (US Patent 5977780).

Ohtsuki et al. teach a sample-holder (100) (figs. 1-17) for measuring draw of a cigarette (9) comprising;

- a draw measurement cell (1A) which comprises a tubular body provided with an access orifice 107 for the cigarette comprising a tobacco rod and a filter wrapped in a

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cigarette paper (**NOTE:** Ohtsuki et al. do not specifically disclose a cigarette comprising a tobacco rod and filter wrapped in a cigarette paper, the examiner takes official notice that standard cigarettes inherently consist of a tobacco rod and a filter wrapped in a cigarette paper), a central cavity (refer to figure 1 below) and an output orifice (106C) provided with a first sphincter (106B) adapted to encapsulate an end portion of said filter to hold the cigarette in place inside said tubular body with said central cavity surrounding said tobacco rod over at least a part of its height as recited in claim 1;

- means for generating (26) an aspiration flow at a lower end (Ohtsuki et al., fig. 1, supply duct connected to 1B) of the filter and a Ventilation-Resistance Measuring device (14) for measuring the load/head loss ("ventilation-resistance") generated by the cigarette on this aspiration flow; (**NOTE:** Although Ohtsuki et al. do not specifically disclose a pressure sensor, the ventilation-resistance measuring (VRM) device detects the change in pressure and/or flow rate by measuring the separate elements of the cigarette in the different chambers of- and the whole cigarette in an airtight cylindrical device. It is well known in the art when a pressurized gas within a confined device moves from a region of high flow into a region of less flow, there is a change in pressure. Applying Bernoulli's Principal to this change in pressure, the flow rate is inversely proportional to the change in pressure. In a confined environment such as in the airtight cylindrical device, a flow rate will be altered (creating high pressure) by a porous object (i.e. the tip of the tobacco rod through which the air flow must flow), and thus the flow rate will be reduced at the exit point (creating higher pressure) of the porous object (i.e. the end tip of the filter). Sensing devices detect the pressure or flow rate and converts the measurement into an electrical signal before processing. Therefore, the VRM disclosed by Ohtsuki et al. thus meets the both the physical and the functional limitation of the recited pressure sensor).

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- wherein the sample-holder is intended to measure parameters of a cigarette, said sample-holder comprising a tubular body, comprising an access orifice (106C) provided with an iris diaphragm (406C) enabling separation of the of the tobacco rod from the atmosphere so as to channel the flow of paper ventilation for its measurement) using first suitable flow measuring means (24), at least a first sphincter (Ref. No. 106 nearest to the bottom of figs. 8 and 10) to hold the cigarette in place by encapsulating the filter end, so as to perform draw measurements using aspiration means associated with said sphincter and second means (25) for measuring pressure; the distance between the iris diaphragm and the lower end of the sphincter being slightly shorter than the length of a cigarette as recited in claim 2;
- wherein a second sphincter (Ref. No. 106 between the first and third sphincters in fig. 10) enabling encapsulation of the filter opposite the first sphincter with respect to a ventilation zone (1C) of the filter so as to channel the ventilation flow of the filter for its measurement as recited in claim 3.
- wherein the sample-holder comprises firstly, a cylindrical structure made of three tubular parts (1A/1B/1C) assembled onto one another, namely:
 - a first part (1A) comprising a hopper (refer to figure 1 below) whose central coaxial cavity comprises a part of flattened cone shape (refer to figure 1 below) followed by a cylindrical part whose diameter is substantially that of the cigarette, the lower part of this hopper comprising an iris diaphragm (107E) as recited in claim 5;

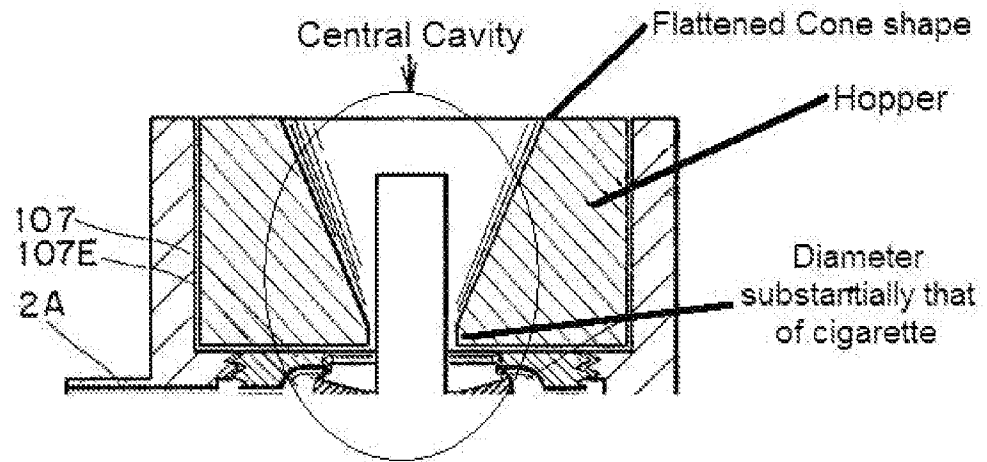


Figure 1. (Ohtsuki et al.) Chamber 1A detailing Hopper Section

- a second part (1B) consisting of two respective ends of a tube in dielectric material fit with gas-tight assembly, the inner diameter of this tube being slightly larger than the cigarette diameter as recited in claim 5; (**NOTE:** Ohtsuki et al. do not specifically disclose a tube of dielectric material fit however, the instant application uses a separate tube of dielectric material covering a portion of the cigarette within the cavity while being tested. Ohtsuki et al. use sample supporting members (106) of dielectric material to support the cigarette within the cylindrical gas-tight assembly exposing more of the cigarette to the air flow during ventilation testing allowing a highly accurate measurement of ventilation characteristics (col. 2, lines 51-57). Furthermore, Ohtsuki et al. disclose that a support contacting the cigarette by face-contact makes it practically impossible to obtain a highly accurate measurement value (col. 2, lines 35-47). Lastly, the instant disclosure has not stated the criticality of the tube, except that it supports the cigarette in the device during testing. Therefore, since the tube of the instant disclosure and the claims only support the cigarette, the sample supporting

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members of Ohtsuki et al. are the functional equivalent and meet the structural limitation used in supporting the cigarette within the gas-tight assembly).

Furthermore, functional recitation(s) in apparatus claims have been given little patentable weight because they fail to add any structural limitations and thereby regarded as intended use language. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. *In re Finstewalder*, 436 F.2d 1028, 168 USPQ 530 (CCPA 1971); *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) ("The manner or method in which such machine is to be utilized is not germane to the issue of the patentability of the machine itself."); *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). When interpreting function language, if the prior art is capable of performing the claimed function—even if not directly disclosed—it anticipates. *In re Schreiber*, 128 F.3d 1473, 1478, 44 USPQ 2d 1429, 1432 (Fed. Cir. 1997); *In re Sinex*, 309 F.2d 488, 135 USPQ 302 (CCPA 1962). See also MPEP § 2114, 2115.

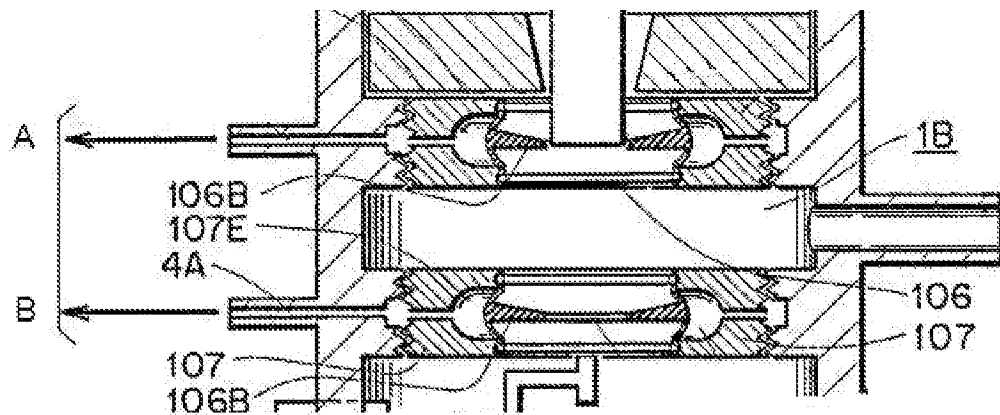


Figure 2. (Ohtsuki et al.) Chamber 1B detailing two respective ends of a tube

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- a third part (1C) comprising a cylindrical central passage with several bore levels carrying a first sphincter intended to encapsulate the cigarette at an upper end (B in figure above) of the filter, and a second sphincter (107E) intended to encapsulate the lower end of the filter as recited in claim 5;
- and secondly aspiration means (25) connected downstream of second sphincter, these aspiration means comprising means for measuring said aspiration flow as recited in claim 5;
- a first air flow duct (fig. 8, duct labeled “ATMOSPHERE” connected to chamber 1A) and a second air flow duct (fig. 8, duct labeled “ATMOSPHERE” connected to chamber 1B) leading into different chambers located between the first and second parts, to channel and measure the paper ventilation flow rate, to channel and measure a filter ventilation flow rate, and a draw with filter ventilation closed as recited in claims 4 and 5.

However Ohtsuki et al. do not specifically disclose a combination sample-holder for measuring humidity comprising:

- a second part consisting of the hyperfrequency cavity, this part comprising a cylindrical casing whose two circular walls comprise two coaxial circular orifices, the cavity surrounding the tobacco rod over at least a fraction of its height so as to allow determination of the humidity content of the tobacco through the analysis of hyperfrequency signals as recited in claims 1, 2 and 5;
- wherein the sample-holder comprises a processor able to execute the process steps as recited in claim 4;

Herrmann teaches a microwave resonator for measuring humidity comprising a second part (11) (fig. 1) consisting of the hyperfrequency cavity (1), this part comprising a cylindrical casing whose two circular walls (9 and 10) comprise two coaxial circular orifices, the cavity surrounding the tobacco rod over

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at least a fraction of its height so as to allow determination of the humidity content of the tobacco through the analysis of hyperfrequency signals as recited in claims 1, 2 and 5.

Ohtsuki et al. disclose the sample supporting device for ventilation testing of cigarettes, the method for controlling the operation; and analyzing measurements of the air flow through the tobacco rod, filter, and paper of the cigarette. Herrmann discloses the hyperfrequency apparatus and method for analyzing the measurements of humidity content of cigarettes. Therefore, it would have been obvious to one skilled in the art at the time of the invention of Ohtsuki et al. to combine a hyperfrequency chamber as taught by Herrmann in the ventilation chamber for detecting and analyzing the moisture content of widely different types of cigarettes (Herrmann, col. 6, line 47). The motivation to combine the two separate devices/processes into a single device is to eliminate two separate testing processes into one and has been shown to increase manufacturing and testing rates, thus reducing production times.

In specific regard to claim 4, the two references contain all the cited combined apparatus limitations of the instant claims including the sample supporting device for ventilation testing of cigarettes; the apparatus that can be programmed for controlling the processes and analyzing ventilation and moisture measurements; and the hyperfrequency chamber for determining moisture content of cigarettes. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to take the steps in the processor/computer of Ohtsuki et al. and combine the steps of measuring the moisture characteristics as taught by Herrmann so the computer makes measurements before, during and after ventilation testing, therefore meeting the functional process steps of claim 4. Lastly, the instant claims refer only to apparatus performing functional limitations (i.e. process steps of claim 4), these functional limitations have little to no patentable weight, since the combined apparatus, measurements, and analyses are contained in Ohtsuki et al. and Herrmann, thus capable of meeting all of the recited functional limitations of claim 4.

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Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is invited to review PTO form 892 accompanying this Office Action listing Prior Art relevant to the instant invention cited by the Examiner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL LE BOULLUEC whose telephone number is (571)270-3892. The examiner can normally be reached on Monday-Thursday from 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams, can be reached on 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Michael Le Boulluec/ 28 August 2008

Examiner, TC 2856

/Hezron Williams/

Supervisory Patent Examiner, Art Unit 2856